TECHNICAL REVIEW DOCUMENT
For
RENEWAL of OPERATING PERMIT 95OPAD072

Metro Wastewater Reclamation District
Adams County
Source ID 0010097

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Revised March and May 2007

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed Operating Permit proposed for this site. The original Operating Permit was issued November 1, 2000. The expiration date for the permit was November 1, 2005. However, since a timely and complete renewal application was submitted, under Colorado Regulation No. 3, Part C, Section IV.C all of the terms and conditions of the existing permit shall not expire until the renewal Operating Permit is issued and any previously extended permit shield continues in full force and operation. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted October 27, 2004, additional information submitted on August 31, 2005, October 25, 2006, January 8 and May 1, 2007, comments on the draft permit and technical review document received on April 13, 2007, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at http://www.cdphe.state.co.us/ap/Titlev.html. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this Operating Permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This Operating Permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this Operating Permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

Metro Wastewater Reclamation District (Metro District) operates a wastewater treatment facility. Primary treatment removes solids from wastewater through screening, grit removal and primary clarification. Secondary treatment uses microorganisms to digest dissolved organic matter. Approximately half the wastewater treated also undergoes further treatment to remove ammonia and nitrates in a nitrification/denitrification process. Prior to release, the wastewater is treated with chlorine to kill remaining bacteria and then dechlorinated with sulfur dioxide. The Metro District is switching to a sodium hypochlorite/sodium bisulfate disinfection system that is scheduled to go on lint in December 2007. The solids removed from the wastewater are treated using anaerobic digestion. Under the trade name METROGRO®, the Metro District applies most of the biosolids from digestion to agricultural land in eastern Colorado. The remaining biosolids not applied to land are mixed with wood chips and turned into METROGRO® Compost, a product homeowners in the metro Denver area can purchase to enrich their gardens and lawns. The composting process for these solids is exempt from the construction permit requirements in Colorado Regulation No. 3, Part B. During anaerobic digestion of the solids, digester gas (methane and carbon dioxide) is produced. Colorado-Golden Energy Corporation then uses this low Btu gas to power two turbines for electric generation. Lastly, fugitive VOC and HAP emissions are released during the wastewater treatment process itself.

In addition, to the wastewater treatment process, the following emission units are addressed as specific emissions units in this permit: a 4,000 gallon underground storage tank to store and dispense gasoline to Metro's motor vehicles, a diesel fired internal combustion engine used to power an electric generator and four (4) solvent cold cleaners. Composting operations are specifically identified as an insignificant activity in Colorado Regulation No. 3, Part C and is identified in the insignificant activity list in Appendix A. In their comments on the draft permit and technical review document, the source indicated that a new emergency generator would be installed as part of the new disinfection plant. This emergency generator is also addressed as a specific emissions unit in this permit.

There are two Operating Permits for this facility. Colorado-Golden Energy Corporation is the permittee for the combustion sources (01OPAD212). Metro is the permittee for the wastewater treatment sources (95OPAD072). This Operating Permit pertains to the wastewater treatment sources only.

The facility is located at 6450 York Street in Denver, Adams County, just southwest of the confluence of the South Platte River and Sand Creek in an industrialized area. The facility is bordered on the west by the South Platte River and on the south by the Burlington Ditch. To the east approximately 1/4 mile is Interstate 270.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to update permitted criteria emissions and to address hazardous air pollutant (HAP) emissions at the facility.

Emissions (in tons/yr) for the total facility covered by both Operating Permits (Colorado-Golden Energy Corporation 01OPAD212 and Metro Permit 95OPAD072) are as follows:

Emission Unit	Potential to Emit (PTE)							
	PM	PM_{10}	SO_2	NO_X	CO	VOC	H_2S	HAPs
Colorado-Golden Energy Sources								
Combustion Sources (turbines, flares, engines and boilers)	17.26	17.26	169.6	86.85	99	12.6	5.3	See Table on Page 15
Metro Waste Water Reclamation District Sources								
Fugitive VOC Emissions from Wastewater Treatment Operations						11.1		See Table on Page 15
Emergency Generator				19.27	3.67			
Proposed New Emergency Generator[1]				1.74	0.95			
Insignificant Heaters and Emergency Generators[2]								
Total	17.26	17.26	169.6	107.86	103.62	23.7	5.3	13.69

[1]If not for NSPS requirements, unit would be APEN exempt if hours of operation do not exceed 100 hrs/yr and exempt from construction permit requirements if hours of operation do not exceed 250 hrs/yr; therefore PTE is based on 250 hrs/yr of operation. Source indicated unit would not operate for more than 100 hrs/yr.
[2]Included in the insignificant activity list in Appendix A of the permit.

Potential to emit for criteria pollutants is based on permitted emissions. The breakdown of HAP emissions by emission unit and/or fuel burned and individual HAPs is provided on page 15 of this document. As discussed in the table footnotes on page 15, HAP emissions for the fuel burning equipment are based on the permitted fuel consumption limits and the most conservative scenario for the equipment permitted to burn that fuel and published emission factors (AP-42 for most, FIRE for the flares burning digester gas). For fugitive emissions from wastewater treatment operations, HAP emissions are based on the maximum individual HAP emissions as calculated from the actual sampling data from the years 1992 – 2005 multiplied by 1.2 and total HAPS are based on permitted VOC emissions. Although this method for determining the PTE of individual HAPS differs from traditional methods, the Division considers that this method is justified as discussed later in Section III of this document.

Emission Unit	Actual Emissions							
	PM	PM_{10}	SO_2	NO_X	CO	VOC	H_2S	HAPs
Colorado-Golden Energy Sources								
Turbines	3.17	3.17	33.73	55.72	30.97	8.88	0.71	
Engines[1]								
Boilers				0.17	0.14			
Flares[1]								
Metro Waste Water Reclamation District Sources								
Fugitive VOC Emissions from Wastewater Treatment Operations						7.7		2.99
Emergency Generator				0.47	0.09			
Total	3.17	3.17	33.73	56.36	31.2	16.58	0.71	2.99

[1]according to APENS filed, these emission units did not operate in the reporting year.
[2]this is a proposed new unit and as such has not commenced operation.

Actual emissions for the wastewater treatment operations and the emergency generator are based on the APENS submitted on March 2, 2006 (emergency generator, based on 11/04 through 12/05) and October 19, 2005 (wastewater treatment, based on 2003 data)

MACT Requirements

Based on the Division's evaluation, this facility is a minor source of HAP emissions; therefore, MACT requirements do not apply to any equipment at this facility at this time. However, it should be noted that EPA has proposed MACT requirements for reciprocating internal combustion engines (RICE) at area sources. The proposed requirements apply to any size RICE (the current rules only apply to engines greater than 500 hp). Based on the proposed requirements published in the federal register on June 12, 2006, existing (construction or reconstruction commences after June 12, 2006) emergency generators and compression ignition engines do not have to meet the requirements of Subparts A and ZZZZ, including the initial notification requirements (40 CFR Part 63 Subpart ZZZZ § 63.6590(b)(3)).

Compliance Assurance Monitoring (CAM) Requirements

None of the significant emission units addressed in the Metro Wastewater Reclamation District Title V Operating Permit are equipped with control devices; therefore, the CAM requirements do not apply to any of the emission units addressed in this permit.

Based on the information provided by the applicant and available to the Division none of the significant emission units at this facility have been modified since the original issuance of the Title V permit.

III. Discussion of Modifications Made

Source Requested Modifications

The source requested the following changes in their October 27, 2004 renewal application.

Page Following Cover Page

The source requested that the Permit Contact be changed. This change has been made as requested.

Section I – General Activities and Summary

In their comments on the draft permit and technical review document, the source requested that additional language be added to Condition 1.1 to the permit to describe the handling of biosolids and changes to the disinfection system. These changes were addressed as follows:

Biosolids Handling

The source indicated in their proposed language revisions to Condition 1.1 that following anaerobic digestion, most of the biosolids are applied to agricultural land in eastern Colorado for use as a fertilizer and/or soil conditioner. The biosolids are de-watered at Metro prior to applying them to the land, although the solids are not completely dry and have a "cakey" texture. Since the biosolids have been treated (i.e. digested) and de-watered prior to application on agricultural lands, the Division considers that there are no RACT issues (e.g. no disposal of VOC by evaporation or spillage) associated with their application. While there could be fugitive dust concerns with the application of biosolids to the land, since the application of these materials is not on contiguous or adjacent property to the Metro facility, those issues are beyond the scope of this permit. It should be noted that application of these biosolids to agricultural lands is exempt from APEN reporting and minor source permitting requirements and are considered insignificant activities under Colorado Regulation No. 3, Part A, Section II.D.1.g, Part B, Section II.D.1.a and Part C, Section IIE.3.g. The Division revised the language in Condition 1.1 to describe the handling of biosolids as requested by the source.

Switch to Sodium Hypochlorite/Sodium Biosulfate Disinfection System

The source indicated that they are switching to a sodium hypochlorite/sodium biosulfate disinfection system in lieu of the use of chlorine. Currently, the facility is subject to the Accidental Release Prevention Program (section 112(r), of the clean air act) because storage of chlorine exceeds the threshold level. When the chlorine disinfection system is replaced and chlorine is no longer stored or used at the facility, the requirements in

112(r), will no longer apply. The Division has revised the language in Condition 1.1 to describe the pending replacement of the chlorine disinfection system as requested by the source. In addition, the Division has added language to Condition 4.1 to indicate the reason the facility is subject to the requirements of 112(r). The Division also added language stating that if, in the future, the source is no longer subject to the requirements, that the annual compliance certification should indicate that.

As part of this project to switch to a sodium hypochlorite/sodium bisulfate disinfection system, the source will be installing a new emergency generator. This new unit is addressed below, under the header "proposed new emergency generator".

Section II.1 – Wastewater Treatment Facility Fugitive Emissions

The source indicated that due to plant design changes and improvements that design capacity has been re-rated and the source requested that the wastewater processing rate and VOC emission limits be revised. This change has been made as requested. Note that although the wastewater processing rate increased, the emission limit did not because composting emissions were previously included in this limit. However, since composting activities are considered an insignificant activity, composting emissions are no longer included in the emission limit for the facility.

HAP Emissions

Typically, for purposes of determining the PTE for a facility, either design rate, 8760 hrs/yr of operation and an appropriate emission factor and/or permitted emission limits are considered PTE. However, EPA has on occasion provided alternative methods of determining PTE, both by policy and regulation, for sources whose PTE based on maximum capacity may result in unrealistically high emissions based on inherent design and operating limits. For instance EPA issued a memo dated November 14, 1995 which addressed calculating PTE from grain handling facilities, which typically are oversized and are constrained in operation, to the extent that they are designed to service a small geographic location and are limited by the amount of grain that can be grown and harvested in that area. In that instance, EPA indicated that the PTE should be based on the highest amount of grain received during the previous 5 years multiplied by a factor of 1.2. In another instance, in the Oil and Natural Gas Production Facilities and Natural Gas Transmission and Storage Facilities MACTs, EPA included provisions to base the PTE on the maximum natural gas production rate over the five years prior to promulgation of the MACT multiplied by a factor of 1.2. In these MACT standards, sources are required to maintain records of the maximum natural gas throughput rate and if those maximum values are exceeded to re-calculate PTE to determine if the facility is still a minor source for HAPS.

In the case of MWRD, based on permitted VOC emissions (currently 13.4 tons/yr, in the renewal application the source has requested 11.1 tpy), emissions of a single HAP could theoretically exceed the major source level of 10 tons per year. However, due to the nature of its operations, this is unlikely. As part of their National Pollutant Discharge

Elimination System (NPDES) permit, the MWRD has implemented an Industrial Waste/Pretreatment Control Program, which is part of a National Pretreatment Program delegated to MWRD and overseen by the EPA. This program was initially approved and implemented in August 1986. As part of this program, MWRD has used a variety of methods such as local limits, industrial discharge permits, a strong enforcement program and community outreach efforts to provide compliance assistance and guidance on pollution prevention to reduce the amount of pollutants coming into their facility. Based on HAP emissions calculated for the years 1992 through 2005, actual HAP emissions have been well below 10 tons/yr of any single HAP (highest was 5.99 tons/yr of toluene). HAP emissions were calculated based on sampling data procured on a quarterly to semi-annual basis. HAP emissions were conservatively based on the mass balance approach (i.e. influent minus effluent) and in cases where the pollutant was detected in the influent and not the effluent, it was assumed that all the HAP in the influent was emitted. The conservative calculation methodology and the low actual emissions supports the notion that use of traditional PTE methods (i.e. use of permit limits) would result in unrealistically high HAP emissions. To that end, the Division has agreed that the HAP PTE for the wastewater treatment operations may be estimated using a method similar to methods approved by EPA for grain handling facilities and oil and gas facilities. Therefore, the HAP PTE for individual HAPS is based on the maximum actual emissions of that HAP over the 1992 through 2005 period multiplied by a factor of 1.2 (maximum HAP was toluene at 5.99 ton/yr, PTE for individual HAP is 5.99 x 1.2 = 7.19 tons/yr).

Since the Division is basing the HAP PTE for this facility on actual data, the Division considers that increases in actual emissions above maximum levels should trigger a review of the facility's source status. Therefore, the Division will include a requirement to re-evaluate HAP emissions and source status in the event that actual emissions of an individual HAP exceeds the previous maximum level. Actual HAP emissions shall be based on a mass balance approach utilizing semi-annual sampling. HAP emissions shall be calculated for the significant HAPS included in the table on page 15 of this document (noted by an asterisk).

Proposed New Emergency Generator

In their comments on the draft permit and technical review document, the source indicated that they would be installing a new emergency generator as part of the project to switch to a sodium hypochlorite/sodium bisulfate disinfection system and that since that generator would operate less than 100 hrs/yr, it would be considered an insignificant activity and should be included in the insignificant activity list in Appendix A of the permit. However, since the proposed new emergency generator will be subject to the New Source Performance Standards for Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII), under the "catch-all" language in Colorado Regulation No. 3, Part A, Section II.D.1, Part B, Section II.D and Part C, Section II.E, the proposed new engine is not exempt from APEN reporting requirements, minor source permitting (construction permit) requirements and cannot be considered an insignificant activity. Therefore, the source submitted information regarding the

proposed new engine on May 1, 2007 via e-mail and the Division included in the requirements for the new engine in the Operating Permit as a combined construction/operating permit.

Applicable Requirements

The proposed new emergency generator is a Cummins, Model QST30-G5 NR2, rated at 1322 hp (full standby) and 63.9 gal/hr (full standby). The engine is a 12 cylinder engine with a displacement of 30.4 liters (2.53 liters/cylinder).

The appropriate applicable requirements for this engine are as follows:

- Except as provided for below, visible emissions shall not exceed 20% opacity (Reg 1, Section II.A.1)

- Visible emissions shall not exceed 30% opacity, for a period or periods aggregating more than six (6) minutes in any sixty (60) minute period, during fire building, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment, when burning coal (Reg 1, Section II.A.4)

  Based on engineering judgment, the Division believes that the operational activities of fire building, cleaning of fire boxes and soot blowing do not apply to diesel engines. In addition, since this engine is not equipped with control equipment the operational activities of adjustment or occasional cleaning of control equipment also do not apply to this engine. Finally, based on engineering judgment, it is unlikely that process modifications will occur with the emergency generator. Therefore, for this unit the 30% opacity provision only applies during startup.

- SO_2 emission shall not exceed 0.8 lbs/mmBtu (Reg 1, Section VI.B.4.b.(i)).

- 40 CFR Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 6, Part A, as follows:

  - Emission limitations per § 60.4205(b)

  - Emission limitations shall be met for the time period specified in § 60.4206

  - Fuel requirements per § 60.4205(b)

  - Monitoring requirements per § 60.4209

  - Compliance requirements per § 60.4211

  - Notification, reporting and recordkeeping requirements in § 60.4214

- 40 CFR Part 60 Subpart A, "General Provisions", as adopted by reference in Colorado Regulation No. 6, Part A, as follows:

  o Circumvention (§ 60.12)

  40 CFR Part 60 Subpart IIII § 60.4218 identifies the general provisions that apply. According to the table, the provisions in § 60.7 (notification and recordkeeping) apply as specified in § 60.4214(a) and this section does not apply to this engine, therefore, the provisions in § 60.7. The table also indicates that § 60.8 (performance testing) and § 60.13 (monitoring requirements) only apply to engines with a displacement greater than or equal to 30 liters per cylinder and therefore do not apply to this engine. In addition, the table indicates that the provisions in § 60.11 do not apply as the requirements are specified in Subpart IIII.

- APEN reporting requirements (Reg 3, Part A, Section II)

- Construction permit requirements in Reg 3, Part B

Emission Factors/Monitoring Plan

The emission factors used to estimate emissions from this unit are the NSPS emission limitations for PM, NO_X and CO. PM_{10} emissions are presumed to equal PM. Although the NSPS emission limit for NO_X is actually for NO_X + NMHC (non-methane hydrocarbons), the Division considers that the VOC emission factor from AP-42 should be used to estimate VOC emissions. SO_2 emissions are based on the fuel sulfur limit of 500 ppm (assuming a diesel density of 7.05 lb/gal). The following emission factors will be included in the permit:

Pollutant	Emission Factor	Emission Factor Source
PM	0.15 g/hp-hr	NSPS limit
NO_X	4.77 g/hp-hr	
CO	2.61 g/hp-hr	
PM_{10}	0.15 g/hp-hr	PM_{10} presumed to equal PM. NSPS PM limit.
SO_2	7.05×10^{-3} lb/gal	NSPS fuel limit (500 ppm) and a presumed diesel density of 7.05 lb/gal.
VOC	6.42×10^{-4} lb/hp-hr	AP-42, Section 3.4 (dated 10/96), Table 3.4-1 (nonmethane 91% of TOC per footnote f).

Note that the emergency generator would normally be exempt from the APEN reporting requirements (and subsequently exempt from construction permit requirements) if it were operated for no more than 100 hours per year except it is subject to NSPS requirements. In addition, if the unit were not subject to NSPS requirements and it operated for more than 100 hours per year but no more than 250 hours per year, an APEN would be required for this unit but it would be exempt from construction permit requirements. The source submitted an APEN on August 15, 2007 based on 100 hours per year of operation. Therefore, the Division will not require that annual emission calculations be conducted unless the unit is operated for more than 100 hours per year.

Typically a construction permit would include annual fuel consumption and emission limitations. However, since this unit is only required to have the construction permit because it is subject to the NSPS, the Division is not including annual fuel consumption and emissions limits in the permit. In the event that this unit were operated more than 250 hours per year (the level above which a construction permit would be required if this unit were not subject to the NSPS), the permit requires that the source submit an application to include annual fuel consumption and emission limitations.

In the absence of credible evidence to the contrary, compliance with the Reg 1 SO_2 emission limit is presumed whenever diesel fuel meeting the NSPS requirements is used as fuel (based on the 500 ppm sulfur limit, a fuel density of 7.05 lb/gal and a heat content of 137,000 Btu/gal, SO_2 emissions are 0.051 lb/mmBtu). The NSPS does not specify how the permittee is required to demonstrate compliance with the fuel limitations; therefore, the permit will require that the source initially sample the tank (if the tank if full prior to permit issuance) and to sample each shipment of diesel fuel. In lieu of sampling, the permittee may use vendor data to demonstrate compliance with the fuel limitation. Compliance with the opacity limitations shall be monitored by conducting Method 9 observation, annually.

Appendix A – Insignificant Activity List

The source submitted a listing of various general categories of insignificant activities and an itemized list of sources identified as insignificant activities. The source indicated that they wished to revise the list of insignificant activities in the permit. The current permit lists general categories of insignificant activities with only a few true itemized activities (i.e. H_2S emissions from digester maintenance and composting operations). The Division has revised the insignificant activity list to include the itemized sources in the renewal application, as well as the previously identified list (H_2S emissions from digester maintenance and composting operations) and the maintenance of the silica gel trap at the Cryogenic Facility (noted in the renewal letter, but not the itemized insignificant activity list). It should also be noted that the source included many itemized insignificant activities under the category for fuel burning equipment < 10 mmBtu/hr for comfort heat. It appears that many of these units may not be used for comfort heat but all of the fuel burning equipment in the itemized list was < 5 mmBtu/hr and the insignificant activity category for fuel burning equipment < 5 mmBtu/hr is not based on the use of the unit. Therefore, the Division included all of the fuel-burning equipment under that insignificant activity category.

Cold Cleaner Solvent Vats

In their renewal application, the source identified four degreasers as insignificant activities. However, in their October 24, 2006 submittal, the source indicated that these units are remote reservoir cold cleaners and are therefore subject to the requirements in Colorado Regulation No. 7, Section X. Although emissions from the degreasers are below the APEN de minimis requirements and therefore exempt from both APEN reporting and construction permit requirements, under the “catch-all” provisions in Regulation No. 3, Part C, Section II.E (2nd paragraph) the degreasers cannot be

considered insignificant activities because they are subject to specific requirements in Regulation No. 7. Since the degreasers cannot be considered insignificant activities, the degreasers will be included in the Operating Permit as significant emission units.

The applicable requirements from Regulation No. 7 for these units are as follows:

- Transfer and storage of waste solvent and used solvent (Reg 7, Sections X.A.3 and 4)

- Solvent Cold Cleaner Requirements (Reg 7, Section X.B)

    - Control Equipment - covers, drainage, labeling and spray apparatus requirements (Reg 7, Section X.B.1)
    - Operating Requirements (Reg 7, Section X.B.2)

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments, to the Metro Wastewater Reclamation District Renewal Operating Permit with the source's requested modifications. These changes are as follows:

General

- The Reg 3 citations were revised throughout the permit, as necessary, based on the recent revisions made to Reg 3.

Section I - General Activities and Summary

- Revised Condition 1.1 to indicate the appropriate attainment status of the area and to reflect that the source is located in the 8-hr ozone control area.

- General Condition 3.g (common provisions, affirmative defense) was added as a state-only condition in Condition 1.4.

- Removed the diesel fuel and waste oil storage tanks from the description in Condition 1.1 and the table in Condition 6.1, since these tanks can now be considered insignificant activities. Added the cold cleaner solvent vat to the description in Condition 1.1 and the table in Condition 6.1.

Section II.1 Wastewater Treatment Facility Fugitive Emissions

- Removed the note under the table that states "Note that this emission unit is exempt from the APEN reporting requirements in Regulation No.3, Part A and the construction permit requirements in Regulation No. 3, Part B." This is an error and should have been included under the Table in Section II.2.

Section II.2. – Gasoline Underground Storage Tank (4,000 gal)

- Added the following note under the table "Note that this emission unit is exempt from the APEN reporting requirements in Regulation No.3, Part A and the construction permit requirements in Regulation No. 3, Part B."

Section II.3 – Emergency Generator

- The fuel sampling requirement (Condition 3.4) was revised to specify that only the weight percent sulfur needed to be determined in the sampling. The permit does not require the heat content of the fuel for either emission calculations or assessing compliance with the Reg 1 sulfur limitation. Therefore, the Division considers that sampling to determine the heat content of the fuel is unnecessary and it has been removed from the permit,

Section II.4 – NSPS Kb Storage Tanks

Effective October 15, 2003, revisions were made to NSPS Subpart Kb and under these revisions tanks that have a capacity of less than 75 cubic meters (19,813 gal) are not subject to the provisions of Subpart Kb (40 CFR part 60.110b(a)), therefore, the NSPS Kb recordkeeping requirements no longer apply to these tanks. Since emissions from each tank are below APEN de minimis levels and since the tanks are no longer subject to any federal NSPS requirements, neither a construction permit nor an APEN is required for these tanks and the tanks can be considered an insignificant activity. Therefore, the tanks will be removed from Section II of the permit and included in the Appendix A of the permit as an insignificant activity.

Ozone Early Action Compact Requirements (Reg 7)

The Division entered into an early action compact to delay being re-designated as a non-attainment area for the 8-hour ozone standard. The early action compact requires controls to reduce VOC emissions in the 8-hour ozone control area. The early action compact VOC control requirements have been included in Colorado Regulation No. 7 and those requirements became effective, on a state-only basis, on May 31, 2004 and on a state and federal basis effective on September 19, 2005 (EPA approval published in the August 19, 2005 federal register). The VOC control requirements apply to oil and gas operations (Colorado Regulation No. 7, Section XII) and stationary internal combustion engines (Colorado Regulation No. 7, Section XVI) located in the 8-hour ozone control area. Since the facility is not involved in oil and gas operations, only the stationary internal combustion engine requirements potentially apply to this facility. The

engine requirements apply to natural gas-fired engines rated at 500 hp or greater. Although the emergency generator listed in Section II of the permit exceeds 500 hp, it burns only diesel fuel and therefore is not subject to the engine requirements. In addition, the emergency generators listed in the insignificant activity list are less than 500 hp, therefore, they are also not subject to the engine requirements.

Section III – Permit Shield

- The citation in the permit shield was corrected and revised to reflect the revisions to Reg 3. The reference to Part C, Section XIII was changed to Part C, Section XIII.B and references to Part C, Section V.C.1.b and C.R.S. 25-7-111(2)(I) were removed, since they did not address the permit shield.

- Removed from the permit shield for non-applicable requirements, the provisions for Colorado Regulation No. 6, Part A (all federal NSPS) and Colorado Regulation No. 8, Part E (all MACTs). The permit shield cannot be granted for such a wide range of requirements. Specific portions or subparts of these regulations must be identified and specific justifications provided. The general justifications included in the current permit are not adequate. For Regulation No. 6, Part A, the justification that the equipment is not new, is not necessarily relevant, as the applicability date varies with the specific subparts. For Regulation No. 8, Part E, the justification that the facility is not a major source is not adequate, since EPA has proposed MACTs for some area sources. The Division is willing to provide the shield for specific subparts if the source specifically identifies those subparts and provides a specific justification as to why those requirements do not apply.

- Some of the non-applicable requirement justifications were revised based on revisions to Regulation No. 3 and/or Regulation No.7. In addition, the Division revised some of the emission unit descriptions in the table in Section 1. Facility is identified as the emission unit in the table if none of the equipment at the facility could potentially apply to the non-applicable requirement and Unit S015 (fugitive emissions from wastewater treatment) is identified as the emission unit in the table if the non-applicable requirement could potentially apply to other equipment at the facility.

- With revisions to Regulation No. 1, Section II.A, the permit shield for non-applicable requirements was removed for Sections II.A.6, 7 and 9 since Sections 7 and 9 are no longer in Reg 1 and Section 6 is exemptions.

Section IV – General Conditions

- The upset revisions in the Common Provisions Regulation (general condition 3.d) were revised December 15, 2006 (effective March 7, 2007) and the revisions were included in the permit. Note that these provisions are state-only enforceable until approved by EPA into Colorado's state implementation plan (SIP).

- Replaced the reference to “upset” in Condition 5 (emergency provisions) and 21 (prompt deviation reporting) with “malfunction”.

- General Condition No. 21 (prompt deviation reporting) was revised to include the definition of prompt in 40 CFR Part 71.

- Replaced the phrase “enhanced monitoring” with “compliance assurance monitoring” in General Condition No. 22.d.

Appendices

- Appendix B and C were replaced with revised Appendices. In addition, the diesel and waste oil storage tanks were removed from the table in Appendices B and C and added the solvent cold cleaners were added.

- EPA’s mailing address was revised (Appendix D).

Metro Waste Water Reclamation District / Trigen Colorado Energy Facility Wide HAP Emissions (tons/yr)

Pollutant	Source							
	NG Combustion[1]	DG Combustion[2]	WW Treatment[3]	MWRD Emerg. Gen[4]	MWRD Insig Heaters[5]	MWRD insig Emerg. Gen.[5]	MWRD Proposed New Emerg. Gen.[6]	Total
acetaldehyde		5.80E-02		1.09E-04		3.32E-03	2.76E-05	6.15E-02
acrolein		3.48E-02		3.40E-05			8.62E-06	3.49E-02
benzene*	1.01E-04	1.56E-00	7.00E-02	3.35E-03	3.55E-04	4.03E-03	8.49E-04	1.64E-00
cadmium	5.29E-05				1.86E-04			2.39E-04
chlorobenzene*			1.30E-01					1.30E-01
chloroethane (ethyl chloride)*			1.00E-01					1.00E-01
chloroform*			1.45E-00					1.45E-00
chromium	6.72E-05				1.87E-04			2.54E-04
dichlorobenzene	5.76E-05				2.37E-04			2.95E-04
ethylbenzene*			7.10E-01					7.10E-01
formaldehyde	3.60E-03	1.31E-01		3.41E-04	1.27E-02	5.10E-03	8.63E-05	1.53E-01
hexane	8.64E-02				3.05E-01			3.91E-01
methylene chloride*		6.11E-02	2.36E-00					2.42E-00
methanol								0.00E+01
naphthalene	2.93E-05							2.93E-05
nickel	1.01E-04				3.55E-04			4.56E-04
styrene*		3.41E-02	9.40E-01					9.74E-01
TCA (methyl chloroform)*		5.57E-02	2.16E-00					2.22E-00
TCE*			1.30E-00					1.30E-00
tetrachloroethylene (perchloroethylene)*			5.30E-00					5.30E-00
toluene*	1.63E-04	4.89E-02	7.19E-00	1.21E-03	5.75E-04	1.77E-01	3.07E-04	7.42E-00
vinyl chloride								0.00E+01
xylene				8.33E-04		1.23E-03	2.11E-04	2.06E-03
Total	9.06E-02	1.99	11.10	5.88E-03	3.20E-01	1.91E-01	1.49E-03	13.69
Highest Single HAP								7.42

[1]based on boilers burning natural gas at permitted annual limit, using AP-42 emission factors
[2]based on the flares burning digester gas at permitted rate, emission factors from FIRE (used boiler emission factors)
[3]Based on individual HAP at maximum actual emission rate for period of 1992 - 2005 x 1.2
[4]based on max hrly fuel and permitted hrs of operation.
[5]Emissions based on 8760 hrs/yr of operation.
[6]Emergency generator is subject to NSPS, therefore can't take APEN or CP exemption. If not for NSPS unit would be exempt from CP if it ran less than 250 hrs/yr; therefore, emissions based on 250 hrs/yr of operation.
*HAPS indicated as the significant HAPS for wastewater treatment. Individual HAPS based on max past actuals x 1.2. Total HAPS based on permitted VOC emission limit